IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A process comprising grafting a polyethylene with a silane comprising at least one ethylenic double bond to produce a silane crosslinkable polyethylene which is then optionally subjected to a crosslinking to provide a silane crosslinked polyethylene wherein the process further comprises the following:

a) a sample is directly taken from the silane crosslinkable polyethylene production before crosslinking;

b) the sample is directly processed into a film;

c) the film is directly analyzed by Infrared Spectroscopy;

d) a predefined area of the IR spectrum is determined; and

e) the area determined in d) is correlated with an expected gel content in the silane crosslinked polyethylene using a predetermined regression curve,

wherein the predefined area of the IR spectrum is the area starting at a wave number in the range from 1150 cm^{-1} to 1205 cm^{-1} and ending at a wave number in the range from 1020 cm^{-1} to 1085 cm^{-1}.

Claim 2 (Previously Presented): The process according to claim 1, wherein the polyethylene is a polyethylene homopolymer or a copolymer of ethylene and at least one other olefin.

Claim 3 (Previously Presented): The process according to claim 2, wherein the other olefin is selected from propylene, butene, octene, vinyl acetate, (meth)acrylate and mixtures thereof.

Claim 4 (Previously Presented): The process according to claim 1, wherein the silane comprising at least one ethylenic double bond is a vinyl silane.

Claim 5 (Previously Presented): The process according to claim 4, wherein the silane is selected from vinyltrimethoxysilane, vinyltriethoxysilane, vinylmethyldimethoxysilane and vinylmethyldiethoxysilane.

Claim 6 (Currently Amended): The process according to claim 1, wherein the predefined area of the IR spectrum is the area starting at a wave number in the range from 1150 cm^{-1} to 1185 cm^{-1} ~~to 1205 cm^{-1}~~ and ending at a wave number in the range from 1020 cm^{-1} to 1085 cm^{-1}.

Claim 7 (Previously Presented): The process according to claim 1, wherein the grafting of the polyethylene with a silane comprising at least one ethylenic double bond to a silane crosslinkable polyethylene is carried out in the presence of a free radical source.

Claim 8 (Previously Presented): The process according to claim 7, wherein the free radical source is a peroxide, a diazo compound or radical generating irradiation.

Claim 9 (Previously Presented): The process according to claim 1, comprising subjecting the silane crosslinkable polyethylene to crosslinking to provide a silane crosslinked polyethylene, wherein the silane crosslinked polyethylene is at least a part of a shaped product.

Claim 10 (Previously Presented): The process according to claim 9, wherein the polyethylene is reacted with a free radical source and the silane to obtain granules of silane crosslinkable polyethylene and then the granules of silane crosslinkable polyethylene are optionally mixed with a catalyst and formed into the shaped product which is then cured <u>by</u> applying heat and water.

Claim 11 (Previously Presented): The process according to claim 10, wherein the sample is taken from the granules of silane crosslinkable polyethylene.

Claim 12 (Previously Presented): The process according to claim 7, wherein the regression curve is obtained according to the following protocol:

A) samples of silane crosslinkable polyethylene are produced from polyethylene containing a standard concentration of free radical source and varying concentrations of silane;

B) samples of silane crosslinkable polyethylene are produced from polyethylene containing a standard concentration of the silane and varying concentrations of free radical source;

C) optionally samples of silane crosslinkable polyethylene are produced from polyethylene containing varying concentrations of free radical source and varying concentrations of silane;

D) each of the samples produced in A), B) and optionally C) above are cured, and the gel content of cured product is measured;

E) of each of the samples produced in A), B) and optionally C) above films of controlled thickness are obtained and subjected to IR spectroscopy;

F) from each of the spectra obtained in E) above the spectrum of a sample which was produced without silane is subtracted, and the resulting spectra are normalized;

G) a predefined area of each of the normalized spectra is determined; and

H) the areas of G) are correlated with the gel content of the corresponding cured products obtained in D) and the regression curve is calculated based on these data.

Claim 13 (Previously Presented): The process according to claim 12, wherein in A) one sample with a silane concentration of 0% and five or more samples with varying silane concentrations are produced.

Claim 14 (Previously Presented): The process according to claim 12, wherein in B) five or more samples with varying concentrations of free radical source are produced.

Claim 15 (Previously Presented): The process according to claim 12, wherein C) is carried out and five or more samples with varying concentrations of silane and free radical source are produced.

Claim 16 (Previously Presented): A method for testing the ability of a silane crosslinkable polyethylene to produce a silane crosslinked polyethylene which comprises the following:

a) a sample is directly taken from a silane crosslinkable polyethylene production process,

b) the sample is directly processed into a film;

c) the film is directly analyzed by Infrared Spectroscopy;

d) a predefined area of the IR spectrum is determined; and

e) the area determined in d) is correlated with the expected gel content of a shaped

product of the silane crosslinked polyethylene using a predetermined regression curve,

wherein the predefined area of the IR spectrum is the area starting at a wave number

in the range from 1150 cm^{-1} to 1205 cm^{-1} and ending at a wave number in the range from

1020 cm^{-1} to 1085 cm^{-1}.

Claim 17 (Previously Presented): The process according to claim 1, wherein the

silane crosslinkable polyethylene is not subjected to crosslinking to provide a silane

crosslinked polyethylene.

Claim 18 (Previously Presented): The process according to claim 17, wherein after

the area determined in d) is correlated with a gel content using the predetermined regression

curve the silane crosslinkable polyethylene is recycled.

Claim 19 (Previously Presented): The process according to claim 16, wherein the

predefined area of the IR spectrum is the area starting at a wave number in the range from

1185 cm^{-1} to 1205 cm^{-1} and ending at a wave number in the range from 1020 cm^{-1} to 1085

cm^{-1}.